

## Chapter 1

# Class of Service Configuration Statements

This chapter shows the complete configuration statement hierarchy for class of service (CoS), listing all possible configuration statements and showing their level in the configuration hierarchy. When you are configuring the JUNOS software, your current hierarchy level is shown in the banner on the line preceding the `user@host#` prompt.

For a complete list of the JUNOS configuration statements, see the *JUNOS System Basics Configuration Guide*.

This chapter is organized as follows:

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## **[edit chassis] Hierarchy Level**

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The following CoS statements can be configured at the [edit chassis] hierarchy level. This is not a comprehensive list of statements available at the [edit chassis] hierarchy level. Only the statements that are also documented in this manual are listed here. For more information about chassis configuration, see the *JUNOS System Basics Configuration Guide*.

```
chassis {
  fpc slot-number pic pic-number {
    max-queues-per-interface (4 | 8);
    q-pic-large-buffer;
  }
}
```

**[edit class-of-service] Hierarchy Level**

```

class-of-service {
  adaptive-shapers {
    adaptive-shaper-name {
      trigger type shaping-rate (percent percent | rate);
    }
  }
  classifiers {
    (dscp | dscp-ipv6 | exp | ieee-802.1 | inet-precedence) classifier-name {
      import (classifier-name | default);
      forwarding-class class-name {
        loss-priority level {
          code-points [ aliases ] [ 6-bit-patterns ];
        }
      }
    }
  }
  code-point-aliases {
    (dscp | dscp-ipv6 | exp | ieee-802.1 | inet-precedence) {
      alias-name bits;
    }
  }
  drop-profiles {
    profile-name {
      fill-level percentage drop-probability percentage;
      interpolate {
        drop-probability [ values ];
        fill-level [ values ];
      }
    }
  }
  fabric {
    scheduler-map {
      priority (high | low) scheduler scheduler-name;
    }
  }
  forwarding-classes {
    queue queue-number class-name priority (high | low);
  }
  forwarding-policy {
    next-hop-map map-name {
      forwarding-class class-name {
        next-hop [ next-hop-name ];
        lsp-next-hop [ lsp-regular-expression ];
      }
    }
  }
  class class-name {
    classification-override {
      forwarding-class class-name;
    }
  }
}

```

```

fragmentation-maps {
  map-name {
    forwarding-class class-name {
      fragment-threshold bytes;
      multilink-class number;
      no-fragmentation;
    }
  }
}
interfaces {
  interface-name {
    scheduler-map map-name;
    scheduler-map-chassis map-name;
    unit logical-unit-number {
      adaptive-shaper adaptive-shaper-name;
      classifiers {
        (dscp | dscp-ipv6 | exp | ieee-802.1 | inet-precedence)
          (classifier-name | default);
      }
      forwarding-class class-name;
      fragmentation-map map-name;
      loss-priority-maps {
        frame-relay-de (map-name | default);
      }
      rewrite-rules {
        dscp (rewrite-name | default);
        dscp-ipv6 (rewrite-name | default);
        exp (rewrite-name | default) protocol protocol-types;
        exp-push-push-push default;
        exp-swap-push-push default;
        frame-relay-de (rewrite-name | default);
        ieee-802.1 (rewrite-name | default);
        inet-precedence (rewrite-name | default);
      }
      scheduler-map map-name;
      shaping-rate rate;
      virtual-channel-group virtual-channel-group-name;
    }
  }
}
loss-priority-maps {
  frame-relay-de map-name {
    loss-priority level code-points [ values ];
  }
}
restricted-queues {
  forwarding-class class-name queue queue-number;
}
rewrite-rules {
  (dscp | dscp-ipv6 | exp | ieee-802.1 | inet-precedence) rewrite-name {
    import (rewrite-name | default);
    forwarding-class class-name {
      loss-priority level code-point (alias | bits);
    }
  }
}
}

```

```

routing-instances routing-instance-name {
  classifiers {
    exp (classifier-name | default);
  }
}
scheduler-maps {
  map-name {
    forwarding-class class-name scheduler scheduler-name;
  }
}
schedulers {
  scheduler-name {
    buffer-size (percent percentage | remainder | temporal microseconds);
    drop-profile-map loss-priority (any | high | medium | low)
      protocol (any | non-tcp | tcp) drop-profile profile-name;
    priority priority-level;
    transmit-rate (rate | percent percentage | remainder) <exact>;
  }
}
tri-color;
virtual-channels {
  virtual-channel-name;
}
virtual-channel-groups {
  virtual-channel-group-name {
    virtual-channel-name {
      scheduler-map map-name;
      shaping-rate (percent percent | rate);
      default;
    }
  }
}
}

```

## [edit firewall] Hierarchy Level

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The following CoS statements can be configured at the [edit firewall] hierarchy level. This is not a comprehensive list of statements available at the [edit firewall] hierarchy level. Only the statements that are also documented in this manual are listed here. For more information about firewall configuration, see the *JUNOS Policy Framework Configuration Guide*.

```

firewall {
  three-color-policer name {
    two-rate {
      (color-aware | color-blind);
      committed-information-rate bps;
      committed-burst-size bytes;
      peak-information-rate bps;
      peak-burst-size bytes;
    }
  }
  family family-name {
    filter filter-name term term-name then {
      virtual-channel virtual-channel-name;
    }
  }
}

```

## [edit interfaces] Hierarchy Level

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The following CoS statements can be configured at the [edit interfaces] hierarchy level. This is not a comprehensive list of statements available at the [edit interfaces] hierarchy level. Only the statements that are also documented in this manual are listed here. For more information about interface configuration, see the *JUNOS Network Interfaces Configuration Guide*.

```

interfaces
  interface-name {
    atm-options {
      linear-red-profiles profile-name {
        high-plp-max-threshold percent;
        low-plp-max-threshold percent;
        queue-depth cells high-plp-threshold percent low-plp-threshold percent;
      }
      plp-to-clp;
      scheduler-maps map-name {
        forwarding-class class-name {
          epd-threshold cells plp1 cells;
          linear-red-profile profile-name;
          priority (high | low);
          transmit-weight (cells number | percent number);
        }
        vc-cos-mode (alternate | strict);
      }
    }
  }
  per-unit-scheduler;

```

```
unit 0 {  
  atm-scheduler-map (map-name | default);  
  family family {  
    address address {  
      destination address;  
    }  
  }  
  plp-to-clp;  
  shaping {  
    (cbr rate | rtvbr peak rate sustained rate burst length |  
      vbr peak rate sustained rate burst length);  
  }  
  vci vpi-identifier.vci-identifier;  
}  
}
```